

CLAIMS AS AMENDED HEREIN

Claims 1-34 (Cancelled)

35. (Previously Amended) An apparatus, comprising:
means for storing a plurality of content records;
means for accessing the content records;
means for storing a persistent user-specific profile;
means for relating content records with a stored user profile;
means for presenting to the user the related content records;
means for receiving a user feedback on said relation; and
means for updating the user profile based on said the feedback.

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36. (Previously Added) The apparatus according to claim 35,
wherein said apparatus is an information access system for automatically presenting users
with information items of interest;
wherein said content records storing means comprises a computer system containing a
database of information items available to be presented to users of the system;
wherein said accessing means comprises at least one access device for enabling users to
communicate with the computer system and access any of the items of available information;
wherein said user profile storing means stores a user profile for each user having access
to the available items of information;
wherein said relating means comprises means for ranking a likely degree of interest for
each of the available items of information in accordance with a user profile;
wherein said presenting means presents the items of information to an access device in
order of ranking and enabling a user to retrieve each item;
wherein said feedback receiving means comprises means for enabling the user to indicate
that user's interest in each retrieved item of information; and
wherein said updating means comprises means for updating the user's profile in response
to indications of interest provided by the user.

37. (Previously Added) The apparatus of claim 36, wherein said ranking means ranks the available items of information for a user on the basis of at least one attribute pertaining to each item of information.

38. (Previously Added) The apparatus of claim 37, wherein said attribute is the contents of the item of information.

39. (Previously Added) The apparatus of claim 36, wherein said ranking means produces a formula which predicts the interest of a user in an item of information on the basis of at least one of a user profile and an attribute related to that item of information.

40. (Previously Amended) A method, comprising:
storing a plurality of content records;
storing a persistent user-specific profile;
receiving a user request for content records;
relating content records with a stored user profile; and
presenting to the user the related content records.

41. (Previously Added) The method according to claim 40, for providing information to users of a computer system, wherein:

said content record storing step comprises storing items of information in an unstructured database within the computer system;

said user profile storing step comprises determining and storing user profiles for users of the computer system who have access to the items of information;

said receiving a request step comprises receiving a request from a user for access to the stored information;

said relating step comprises determining a user's likely degree of interest in items of information stored in said database, in accordance with that user's profile, and ranking the items of information in accordance with their determined degrees of interest; and

said presenting step comprises displaying the items of information with an indication of their relative rankings.

42. (Previously Added) The method of claim 41, wherein said items of information are displayed in order of their ranking.

43. (Previously Added) The method of claim 41, wherein the user profiles and the determined degree of interest in items of information are based upon at least one attribute associated with each item of information.

44. (Previously Added) The method of claim 43, wherein said attribute is the content of the item of information.

45. (Previously Added) The method of claim 41, further including the steps of selecting an item of information from those which are displayed, providing an indication of the user's actual interest in the selected item of information, and storing the user's indicated interest.

46. (Previously Added) The method of claim 41, wherein the likely degree of interest is determined for all of the items of information stored in said database in response to receipt of a user's request for access.

47. (Previously Added) A method, comprising the steps of:
automatically generating a user-specific profile representing an interest summary based on a history of access to objects; and
persistently storing the user profile in memory.

48. (Previously Added) The method of claim 47, for providing a user with access to selected ones of a plurality of target objects and sets of target object characteristics that are accessible via an electronic storage media, where said user is connected via user terminals and data communication connections to a target server system which accesses said electronic storage media, wherein:

said automatically generating step generates at least one user target profile interest summary for a user at a user terminal, each of said user target profile interest summary being

indicative of ones of said target objects and sets of target object characteristics accessed by said user; and

said storing step stores said at least one user target profile interest summary in a memory.

49. (Previously Added) The method of claim 48, further comprising the steps of:
enabling said user to access said plurality of target objects and sets of target object characteristics stored on said electronic storage media via said user target profile interest summaries;

said step of enabling access comprising:

correlating said user target profile interest summaries, generated for said user, with target profiles generated for said plurality of target objects and sets of target object characteristics to identify ones of said plurality of target objects and sets of target object characteristics stored on said electronic storage media that are likely to be of interest to said user;

transmitting a list, that identifies at least one of said identified ones of said plurality of target objects and sets of target object characteristics, to said user; and

providing access to a selected one of said plurality of target objects and sets of target object characteristics stored on said electronic storage media in response to said user selecting an item from said list;

said step of providing access further comprising:

transmitting data, in response to said user activating said user terminal to identify said selected item on said list, indicative of said user's selection of said selected item from said user terminal to said target server via a one of said data communication connections;

retrieving, in response to receipt of said data from said user terminal, a one of a target object and set of target object characteristics identified by said selected item from said electronic storage media; and

transmitting said retrieved one of said target object and set of target object characteristics to said user terminal for display thereon to said user,

said step of automatically generating comprising:

automatically updating said user target profile interest summary for said user as a function of said target objects and sets of target object characteristics retrieved by said user.

50. (Previously Added) The method of claim 48, wherein said automatically generating step comprises:

creating a customer profile, said customer profile indicating a respective customer's preferences for data;

monitoring a history of data objects accessed by the customer; and

automatically updating the customer profile in accordance with the content profiles accessed by the customer to automatically update the customer profile to represent the customer's preferences.

51. (Previously Added) The method of claim 47, wherein said method is for scheduling customer access to data from a plurality of data sources,

further comprising the steps of:

creating content profiles for each data source of said data, said content profiles indicating a degree of content of predetermined characteristics in data from each data source;

said generating step comprises creating at least one customer profile for each eligible recipient of said data, said customer profile indicating a customer's preferences for data having predetermined characteristics;

monitoring which data sources are actually accessed by each recipient; and

updating, without input from each customer, each customer profile in accordance with the content profiles of the data sources actually accessed by that customer to automatically update each customer's actual preferences for said predetermined characteristics.

52. (Previously Added) The method of claim 47, wherein said method is for scheduling customer access to video programs,

further comprising the steps of:

creating content profiles for each video program available for viewing, said content profiles indicating a degree of content of predetermined characteristics in each video program;

creating at least one customer profile for each customer of said video programs, said customer profile indicating a customer's preferences for predetermined characteristics of the video programs;

monitoring which video programs are actually viewed by each customer; and

updating, without input from each customer, each customer profile in accordance with the content profiles of the video programs actually viewed by that customer to automatically update each customer's actual preferences for said predetermined characteristics.

53. (Previously Added) The method of claim 52, comprising the further steps of receiving customer identity information and determining from said customer identity information which customer profile to update in said updating step.

54. (Previously Added) The method of claim 47, wherein said method is for scheduling customer access to data from a plurality of data sources, further comprising the steps of:

creating a customer profile for each customer of said plurality of data sources, said customer profile indicating a customer's preferences for predetermined characteristics of the data sources;

monitoring which data sources are actually accessed by each customer; and

updating each customer profile to reflect a frequency of selection of the data sources by customers with customer profiles substantially similar to said each customer profile.

55. (Previously Amended) An apparatus, comprising:
means for automatically generating a user-specific profile representing an interest summary based on a history of access to objects; and
a memory for persistently storing the user profile.

56. (Previously Added) The apparatus according to claim 55, for providing a user with access to selected ones of a plurality of target objects and sets of target object characteristics that are accessible via an electronic storage media, where said user is connected via user terminals and data communication connections to a target server system which accesses said electronic storage media, comprising:

means for automatically generating at least one user target profile interest summary for a user at a user terminal, each of said user target profile interest summaries being indicative of ones of said target objects and sets of target object characteristics accessed by said user; and

means for storing said at least one user target profile interest summary in a memory.

57. (Previously Added) The apparatus of claim 56, further comprising:

means for enabling said user to access said plurality of target objects and sets of target object characteristics stored on said electronic storage media via said user target profile interest summaries;

said means for enabling access comprising:

means for correlating said user target profile interest summaries, generated for said user, with target profiles generated for said plurality of target objects and sets of target object characteristics to identify ones of said plurality of target objects and sets of target object characteristics stored on said electronic storage media that are likely to be of interest to said user;

means for transmitting a list, that identifies at least one of said identified ones of said plurality of target objects and sets of target object characteristics, to said user; and

means for providing access to a selected one of said plurality of target objects and sets of target object characteristics stored on said electronic storage media in response to said user selecting an item from said list.

said means for providing access comprising:

means for transmitting data, in response to said user activating said user terminal to identify said selected item on said list, indicative of said user's selection of said selected item from said user terminal to said target server via a one of said data communication connections;

means for retrieving, in response to receipt of said data from said user terminal, a target object identified by said selected item from said electronic storage media; and

means for transmitting said retrieved target object to said user terminal for display thereon to said user;

said means for automatically generating comprising:

means for automatically updating said user target profile interest summary for said user as a function of said target objects and sets of target object characteristics retrieved by said user.

58. (Previously Amended) A system, comprising:

a persistent customer profile, said customer profile indicating a respective customer's preferences for data;

means for monitoring a history of data objects accessed by the customer; and
means for automatically updating the customer profile in accordance with content profiles accessed by the customer to automatically update the customer profile to represent the customer's preferences.

59. (Previously Added) The system according to claim 58, for scheduling customer access to data from a plurality of data sources, further comprising:

content profiles for each data source of said data, said content profiles indicating a degree of content of predetermined characteristics in data from each data source;

wherein:

at least one customer profile for each eligible recipient of said data is provided, said customer profile indicating the customer's preferences for data having predetermined characteristics;

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said monitoring means monitors which data sources are actually accessed by each recipient; and

said updating means updates, without input from each customer, each customer profile in accordance with the content profiles of the data sources actually accessed by that customer to automatically update each customer's actual preferences for said predetermined characteristics.

60. (Previously Added) The system according to claim 58, for scheduling customer access to video programs received from a video head end, further comprising:

content profiles for each video program available for viewing, said content profiles indicating a degree of content for predetermined characteristics in each video program;

wherein:

at least one customer profile for each customer of said video programs is provided, said customer profile indicating the customer's preferences for predetermined characteristics of the video programs;

said means for monitoring monitors which video programs are actually viewed by each customer; and

said means for updating updates, without input from each customer, each customer profile in accordance with the content profiles of the video programs actually viewed by that

customer to automatically update each customer's actual preferences for said predetermined characteristics.

61. (Previously Added) The system as in claim 60, further comprising:
means for transmitting said content profiles to each customer along with electronic program guide data for upcoming television viewing periods.

62. (Previously Added) The system as in claim 60, further comprising means for inputting customer identity information and for determining from said customer identity information which customer profile to update with said updating means.

63. (Previously Added) The system according to claim 60, for scheduling customer access to data provided by a plurality of data sources, further comprising:

means for creating a customer profile for each customer of said plurality of data sources, said customer profile indicating said customer's preferences for predetermined characteristics of the data sources;

said monitoring means monitors which data sources are actually accessed by each customer; and

said updating means updates each customer profile to reflect a frequency of selection of the data sources by customers with customer profiles substantially similar to said each customer profile.

64. (Previously Added) The system according to claim 58, being a multimedia terminal for receiving data from a plurality of data sources, further comprising:

means for storing at least one customer profile indicating a customer's preferences for data having predetermined characteristics;

means for storing content profiles for each data source of said data, said content profiles indicating a degree of content of said predetermined characteristics in data from each data source;

means for inputting recipient identity information;

means for selecting different customer profiles which correspond to said recipient identity information in accordance with the time of day and day of the week;

processing means for relating said selected customer profiles with the content profiles for the data available from each data source to the customer at a particular time and for determining a subset of data having content profiles which most closely match said selected customer profile; and

a display guide for presenting said subset of data to said customer for selection.

65. (Previously Added) The system as in claim 64, further comprising means for storing an electronic program guide, wherein said display guide highlights programs within said electronic program guide which correspond to said subset of data.

66. (Previously Added) A system, comprising:
means for receiving subscriber specific data;
means for receiving program control information; and
program selection means, operably connected to the storing means and the receiving means, for selecting one or more programs using the user subscriber specific information and the program control information.

67. (Previously Added) The system according to claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing program description data, and subscriber specific data, the set top terminal comprising:

said subscriber specific data receiving means being means for gathering subscriber specific data to be used in selecting programs;

means, connected to the gathering means, for storing the subscriber specific data;

said program control information receiving means being means for receiving the program control information containing the program description data;

said program selection means, being operably connected to the storing means and the means for receiving program control information, for selecting one or more programs using a subscriber's programming preferences and the program control information, comprising:

a processor, wherein the subscriber programming preferences are generated from the subscriber specific data; and
means, operably connected to the program selection means, for suggesting the selected programs to the subscriber.

FI 68. (Previously Added) The system of claim 67, wherein:
the set top terminal receives program signals and the program selection means resides within a set top terminal;
the set top terminal receives menu details from the television program delivery system, a display is used, and wherein the means for gathering subscriber specific data comprises:
a memory device for storing received menu details,
the stored menu details include a cursor overlay, the means for generating menu screens comprises a means for generating the cursor overlay, the generated menu screens are displayed on the display, and wherein the subscriber interface means comprises a means for moving the generated cursor overlay on the displayed menu screens;
a means, connected to the memory device, for generating menu screens by integrating the program control information with the stored menu details;
a means, connected to the generating means, for eliciting subscriber responses using the generated menu screens;
a subscriber interface means for entering subscriber responses;
the set top terminal further comprising a means for generating a signal identifying a selected program's location on the received program signal.

69. (Previously Added) The system according to claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing program description data, and subscriber specific data indicative of a subscriber's programming preferences, wherein the set top terminal receives menu details from the television program delivery system, the set top terminal comprising:

said subscriber specific receiving means being means for gathering the subscriber specific data indicative of subscriber preferences to be used in selecting programs, wherein the means for gathering subscriber specific data comprises:

- a first means for storing received menu details;
- a means for generating menu screens by integrating the program control information with the stored menu details;
- a display, connected to the generating means, wherein menu screens to elicit subscriber responses are displayed; and
- a subscriber interface means for entering subscriber responses to displayed menu screens;
- a second means, connected to the gathering means, for storing the subscriber specific data;

said receiving means being means for receiving the program control information comprising program description data;

said program selection means being operably connected to the second storing means and the receiving means, for selecting one or more programs using the subscriber specific data and program control information whereby the selected programs correspond to the subscriber's programming preferences; and

wherein the display is used to suggest the selected programs to the subscriber.

70. (Previously Added) The set top terminal of claim 69, wherein the stored menu details include a cursor overlay and the means for generating menu screens comprises a means for generating the cursor overlay, and wherein the subscriber interface means comprises a means for moving the generated cursor overlay on the displayed menu screens.

71. (Previously Added) The system according to claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing program description data, and subscriber specific data indicative of a subscriber's programming preferences, the set top terminal comprising:

said subscriber specific data receiving means being means for gathering the subscriber specific data indicative of subscriber preferences to be used in selecting programs;

means, connected to the gathering means, for storing the subscriber specific data;

said receiving means being means for receiving the program control information comprising program description data;

said program selection means being operably connected to the storing means and the receiving means, for selecting one or more programs using the subscriber specific data and program control information whereby the selected programs correspond to the subscriber's programming preferences, wherein the program selection means comprises:

a means for matching the subscriber specific data to a program described by the program control information; and

wherein the set top terminal further comprises a means for tuning to the matched program; and

a means, operably connected to the program selection means, for displaying for suggesting the selected programs to the subscriber.

72. (Previously Added) The system according to claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing program description data, and subscriber specific data indicative of a subscriber's programming preferences, wherein the set top terminal receives program signals, the set top terminal comprising:

said subscriber specific receiving means being means for gathering the subscriber specific data indicative of subscriber preferences to be used in selecting programs;

means, connected to the gathering means, for storing the subscriber specific data;

said receiving means being means for receiving the program control information comprising program description data;

said program selection means being operably connected to the storing means and the receiving means, for selecting one or more programs using the subscriber specific data and program control information whereby the selected programs correspond to the subscriber's programming preferences;

a means, operably connected to the program selection means, for displaying for suggesting the selected programs to the subscriber; and

a means for generating a signal identifying a selected program's location on the received program signal.

73. (Previously Added) The system according to claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing menu screen details and program description data, and a subscriber's programming preferences, by searching program abstracts stored in a database for programs which correlate to key words mapped from one or more subscriber responses to search criteria containing a plurality of selectable entries on one or more menu screens, further comprising:

a means for storing the program abstracts in a database;

a memory means, connected to the receiving means, for storing the menu screen details;

means, connected to the memory means for storing menu screen details, for generating menu screens using the stored menu screen details, wherein the menu screens are generated by integrating the program control information with the stored menu screen details, and wherein the menu screens list search criteria comprising the plurality of selectable entries;

a display wherein the generated menu screens are displayed;

said subscriber specific data receiving means being:

a subscriber interface means for entering subscriber responses to the plurality of selectable entries on the menu screens;

a means, connected to the subscriber interface means, for mapping the subscriber responses into the key words;

a means, connected to the mapping means, for searching the program abstract database for programs consisting of one or more of the key words;

said program selection means being operably connected to the receiving means and searching means, for selecting one or more programs, wherein programs are selected using the search of the searching means; and

wherein the display is used to suggest the selected programs to the subscriber.

74. (Previously Added) The system of claim 73, wherein:
program abstracts are included in the received program control information, and wherein the set top terminal further comprises a means connected to the receiving means, for reprogramming the means for storing the program abstracts to include the received program abstracts;

the subscriber interface means comprises a means for interpreting the subscriber responses and a means for storing the subscriber responses; and

the stored menu screen details include a cursor overlay and the means for generating menu screens comprises a means for generating the cursor overlay and wherein the subscriber interface means comprises a means for moving the generated cursor overlay on the displayed menu screens.

FI 75. (Previously Added) The system according to claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs through the use of program control information and program watched data indicative of a subscriber's most watched programs, the set top terminal further comprising:

said means for receiving subscriber specific data being means for gathering the program watched data;

a memory means for storing the gathered program watched data;

said program selection means being operably connected to the memory means and the receiving means, for selecting a program using the stored program watched data and the received program control information; and

a means, operably connected to the program selection means, for displaying the selected program.

76. (Previously Added) The system according to claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information and channel watched data indicative of a subscriber's favorite channels, the set top terminal comprising:

said means for receiving subscriber specific data comprising means for gathering the channel watched data;

a memory means for storing the gathered channel watched data;
said program selection means comprising:
 a processing means, operably connected to the memory means and the receiving means, for determining suggested favorite channels, comprising:
 a channel selection means for selecting a plurality of channels using the stored channel watched data; and
 means to generate a signal identifying the selected channels; and
 a means, operably connected to the processing means, for displaying a representation of the selected channels.

77. (Previously Added) The system of claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing program description data, by searching program abstracts for programs which correlate to key words mapped from one or more subscriber responses to a plurality of selectable entries presented on a display, further comprising:
 a means for storing the program abstracts in a database;
 a means for presenting the plurality of selectable entries to the subscriber using the display;
 said means for receiving subscriber specific data comprising a subscriber interface means for entering subscriber responses to the plurality of selectable entries;
 a means, connected to the subscriber interface means, for mapping the subscriber responses into the key words;
 a means, connected to the mapping means and storing means, for searching the program abstract database for programs consisting of one or more of the key words;
 said program selection means being operably connected to the receiving means and searching means, for selecting one or more programs, wherein programs are selected using the search of the searching means; and
 means, connected to the program selection means, for suggesting the selected programs to the subscriber using the display.

78. (Previously Added) The system of claim 77, wherein:

program abstracts are included in the received program control information, and wherein the set top terminal further comprises a means, connected to the receiving means, for reprogramming the means for storing the program abstracts to include the received program abstracts;

the program control information further contains menu screen details and the selectable entries are displayed on one or more menu screens by the presenting means, the set top terminal further comprising:

a memory means, connected to the receiving means, for storing the menu screen details; and

a means, connected to the memory means and the presenting means, for generating menu screens using the stored menu screen details, wherein the menu screens are generated by integrating the program control information with the stored menu screen details, and wherein the generated menu screens list search criteria comprising the plurality of selectable entries; and

the stored menu screen details include a cursor overlay and the means for generating menu screens comprises a means for generating the cursor overlay, and wherein the subscriber interface means comprises a means for moving the generated cursor overlay on the displayed menu screens.

79. (Previously Added) The system of claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing scheduled program description data, the set top terminal further comprising:

a means for creating personal profile information;

a means, connected to the creating means, for storing the personal profile information;

said means for receiving program control information being means for receiving the program control information comprising the scheduled program description data;

said program selection means being means, connected to the storing means and receiving means, for selecting at least one program for suggestion to the viewer, comprising:

a means for transforming the personal profile information into preferred program indicators, wherein a preferred program indicator comprises a program category with each program category having a weighted value;

a means for matching the preferred program indicators with the scheduled program description data, wherein each scheduled program is assigned a weighted value based on at least one associated program category;

a means for prioritizing the scheduled programs from highest weighted value programs to lowest weighted value programs; and

a means for indicating one or more programs meeting a predetermined weight related threshold, wherein all other programs are excluded from program suggestion; and

means, operably connected to the program selection means, for displaying for suggesting the selected programs to the subscriber.

80. (Previously Added) The system of claim 66, being a set top terminal used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing scheduled program description data, the set top terminal further comprising:

said means for receiving subscriber specific data being means for gathering program watched data;

a means, connected to the gathering means, for storing the program watched data;

said means for receiving program control information being means for receiving the program control information comprising the scheduled program description data;

said program selection means being means, connected to the storing means and receiving means, for selecting at least one program for suggestion to the viewer, comprising:

a means for transforming the program watched data into preferred program indicators, wherein a program indicator comprises a program category with each program category having a weighted value;

a means for comparing the preferred program indicators with the scheduled program description data, wherein each scheduled program is assigned a weighted value based on at least one associated program category;

a means for prioritizing the scheduled programs from highest weighted value programs to lowest weighted value programs; and

a means for indicating one or more programs meeting a predetermined weight threshold, wherein all other programs are excluded from program suggestion; and

means, operably connected to the program selection means, for displaying for suggesting the selected programs to the subscriber.

81. (Previously Added) The system of claim 67, wherein the program selection means resides within a network controller.

82. (Previously Added) The system according to claim 66, being a terminal for program suggestion using user preference data concerning user preferences and program control information concerning available programs, comprising:

said means for receiving subscriber specific data comprising means for gathering the user preference data;

a means, connected to the gathering means, for storing the gathered user preference data;

said means for receiving program control information comprising means for accessing the program control information;

said program selection means being means, connected to the storing means and accessing means, for selecting one or more programs using a subscriber's programming preferences and the program control information, comprising:

a processor, wherein the subscriber programming preferences are generated from the user preference data; and

a means, connected to the selecting means, for suggesting the selected programs to the user.

83. (Previously Added) The system of claim 66, being a program suggestion system for suggesting programs to subscribers of a television program delivery system by using program control information containing program description data and by searching program abstracts stored in a database at a network controller, the suggested programs resulting from a search of the program abstracts for key words sent to the network controller from a set top terminal,

wherein the key words are mapped from one or more subscriber responses to a plurality of selectable entries at the set top terminal, the system comprising:

a set top terminal comprising:

a means for receiving programs;

a means for presenting the plurality of selectable entries to the subscriber;

said means for receiving subscriber specific data being a subscriber interface means for entering subscriber responses to the plurality of selectable entries; and

a means, connected to the subscriber interface means, for mapping the subscriber responses into the key words; and

a network controller, networked to the set top terminal, comprising:

said means for receiving the program control information;

a means for storing the program abstracts in a data base;

a means for gathering the key words;

said program selection means being operably connected to the receiving means, gathering means and storing means, for selecting one or more programs for suggestion to the subscriber, comprising:

a means for searching the program abstract data base for program abstracts consisting of one or more key words; and

a means for distributing the selected programs to the set top terminal.

84. (Previously Added) The system of claim 66, being an apparatus for suggesting programs to subscribers using program control information containing program description data, and subscriber specific data, the apparatus comprising:

said means for receiving subscriber specific data being means for gathering the subscriber specific data to be used in selecting programs;

a means, connected to the gathering means, for storing the subscriber specific data; and

said program selection means being operably connected to the storing means and the receiving means, for selecting one or more programs using a subscriber's programming preferences and the program control information, comprising:

a processor, wherein the subscriber programming preferences are generated from the subscriber specific data.

85. (Previously Added) The system according to claim 66, being an apparatus used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing program description data, and subscriber specific data, the apparatus further comprising:

said means for receiving subscriber specific data being a remote control, wherein the subscriber specific data is obtained to be used in selecting programs;

a memory, operably connected to the remote control, wherein the subscriber specific data is stored;

said means for receiving program control information being a demodulator, wherein the program control information containing the program description data is received;

said program selection means being a central processing unit, operably connected to the memory and the demodulator, wherein programs are selected using a subscriber's programming preferences and the program control information, and wherein the subscriber programming preferences are generated from the subscriber specific data; and

a display, operably connected to the processor, wherein the selected programs are suggested to the subscriber on the display.

86. (Previously Added) The system of claim 66, being an apparatus used by subscribers of a television program delivery system for suggesting programs through the use of program control information and program watched data indicative of a subscriber's most watched programs, the apparatus comprising:

said means for receiving program control information being a demodulator, wherein the program control information is received;

said means for receiving subscriber specific data being a remote control interface, wherein the program watched data is gathered;

a memory, wherein the gathered program watched data is stored;

said program selection means being a processor, operably connected to the memory and the demodulator, wherein a program is selected using the stored program watched data and the received program control information;

a display, operably connected to the processor, for displaying the selected program.

87. (Previously Added) The system of claim 66, being an apparatus used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing program description data, by searching program abstracts for programs which correlate to key words mapped from one or more subscriber responses to a plurality of selectable entries presented on a display, the apparatus further comprising:

said means for receiving program control information being a demodulator, wherein the program control information is demodulated;

a memory, connected to the demodulator, wherein the program abstracts are stored;

a combiner, wherein the plurality of selectable entries are presented to the subscriber using the display;

said means for receiving subscriber specific data being a subscriber interface, wherein subscriber responses to the plurality of selectable entries are entered;

logic circuitry, connected to the subscriber interface, wherein the subscriber responses are mapped into the key words;

said program selection means being a processor, operably connected to the logic circuitry and the memory, wherein the stored program abstracts are searched for programs consisting of one or more of the key words, and wherein one or more programs are selected using the search; and

wherein the selected programs are suggested to the subscriber using the display.

88. (Previously Added) The system according to claim 66, being a network controller, adapted for remotely controlling a plurality of set top terminals in a television program delivery system, for suggesting programs to subscribers by making program suggestions using subscriber specific data and program control information received from a remotely located source containing program description data, wherein the suggested programs are transmitted to the set top terminal, the network controller comprising:

said means for receiving program control information comprising means for receiving the program control information containing program description data;

said means for receiving subscriber specific data comprising means for gathering the subscriber specific data from a set top terminal;

a means, connected to the gathering means, for storing the subscriber specific data;

said program selection means being means, operably connected to the receiving means and the storing means, for suggesting one or more programs using a subscriber's programming preferences and the received program control information, comprising:

a processor, wherein the subscriber programming preferences are generated from the subscriber specific data; and

a means, connected to the suggesting means, for transmitting the suggested programs to the set top terminal for presentation to the subscriber.

89. (Previously Added) The system of claim 88, wherein key words are used in searching program abstracts to assist in suggesting programs, and wherein the network controller further comprises:

a means for storing program abstracts; and

wherein the means for suggesting comprises a means for searching the stored program abstracts for one or more programs consisting of one or more of the key words.

90. (Previously Added) The system according to claim 66, being a network controller, adapted for remotely controlling a plurality of set top terminals in a television program delivery system, for suggesting programs to subscribers by making program suggestions using subscriber specific data indicative of a subscriber's programming preferences received from a set top terminal, program control information received from a remotely located source containing program description data, and program abstracts with key words, wherein the suggested programs are transmitted to the set top terminal, the network controller comprising:

said means for receiving program control information being means for receiving the program control information containing program description data;

said means for receiving subscriber specific data being means for gathering the subscriber specific data indicative of subscriber preferences from a set top terminal;

a means, connected to the gathering means, for storing the subscriber specific data;

a memory means for storing program abstracts;

said program selection means being means, operably connected to the receiving means and the storing means, for suggesting one or more programs using the stored subscriber specific data and the received program control information, whereby the suggested programs correspond to the subscriber's programming preferences, wherein key words are used in searching the stored program abstracts to assist in suggesting programs, and wherein the means for suggesting comprises:

a means for searching the stored program abstracts for one or more programs consisting of one or more of the key words; and

a means, connected to the suggesting means, for transmitting the suggested programs to the set top terminal for presentation to the subscriber.

91. (Previously Added) The system of claim 66, being a network controller for suggesting programs to subscribers of a television program delivery system by using program control information containing program description data and by searching program abstracts for key words that are mapped from one or more subscriber responses received from a set top terminal, further comprising:

a means for storing the program abstracts in a data base;

said means for receiving subscriber specific data comprising a means for gathering subscriber responses to a plurality of selectable entries from the set top terminal;

a means, connected to the gathering means, for mapping the subscriber responses into the key words;

a means, operably connected to the receiving means, storing means, gathering means and mapping means, for suggesting one or more programs, comprising:

said selecting means comprising means, connected to the storing and mapping means, for searching the program abstract data base for one or more key words; and
a means for distributing the suggested programs to the set top terminal.

92. (Previously Added) A method, comprising the steps of:
receiving subscriber specific data;
receiving program control information; and

selecting one or more programs using the user subscriber specific information and the program control information.

93. (Previously Added) The method of claim 92, used by a set top terminal for a television program delivery system for suggesting programs to subscribers for display on a television using program control information and subscriber specific data, the method further comprising:

said receiving subscriber specific data comprising gathering subscriber specific data to be used in selecting programs;

storing the gathered subscriber specific data;

said receiving program control information comprising receiving program control information to be used in selecting programs;

said selecting step comprising selecting one or more programs using a subscriber's programming preferences and the received program control information, wherein the subscriber programming preferences are generated from the subscriber specific data; and

suggesting the selected programs to the subscriber.

94. (Previously Added) The method of claim 93, wherein a display is used and wherein the set top terminal generates menus based on menu details received over the program television delivery system further comprising the following steps:

storing the received menu details;

generating menu screens using the stored menu details by integrating the received program control information with the stored menu details;

displaying menu screens whereby the menu screens identify the selected programs; and receiving subscriber responses to the displayed menu screens.

95. (Previously Added) The method of claim 92, used by a set top terminal for a television program delivery system for suggesting programs to subscribers for display on a television using program control information and subscriber specific data indicative of a subscriber's programming preferences, wherein the set top terminal generates menus based on

menu details received over the program television delivery system, the method comprising the following steps:

- storing the received menu details;
- said receiving subscriber specific data comprising gathering subscriber specific data indicative of subscriber preferences to be used in selecting programs;
- storing the gathered subscriber specific data;
- said receiving program control information comprising receiving program control information to be used in selecting programs;
- said selecting step comprising selecting one or more programs using the stored subscriber specific data and received program control information wherein the selected programs correspond to the subscriber's programming preferences;
- generating menu screens using the stored menu details by integrating the received program control information and the stored menu details;
- displaying menu screens whereby the menu screens identify the selected programs and suggest the selected programs to the subscriber; and
- receiving subscriber responses to the menu screens.

96. (Previously Added) The method of claim 92, used by a set top terminal for a television program delivery system for suggesting programming to subscribers using program control information containing menu screen details by searching program abstracts for programs which correlate to key words mapped from one or more subscriber responses to search criteria containing a plurality of selectable entries on one or more menu screens displayed on a television, comprising the steps of:

- storing the program abstracts in a database;
- storing menu screen details;
- generating the menu screens wherein the menu screens are generated by integrating the program control information with the stored menu screen details, and wherein the generated menu screens list the search criteria containing the plurality of selectable entries;
- displaying the menu screens;
- said receiving subscriber specific data comprising gathering subscriber responses to the plurality of selectable entries on the menu screens;

mapping the subscriber responses into the key words;
searching the stored program abstracts for abstracts comprising one or more of the key words;
said selecting step comprising selecting one or more of the programs, whereby the programs are selected using the search of the stored program abstracts; and
suggesting the selected programs.

97. (Previously Added) The method of claim 92, used in a television program delivery system for suggesting programs to subscribers for display on a television using program control information and subscriber specific data, the method further comprising:

said receiving subscriber specific data comprising gathering subscriber specific data to be used in selecting programs;

storing the gathered subscriber specific data;

said receiving program control information comprising receiving program control information to be used in selecting programs; and

said selecting step comprising selecting one or more programs using a subscriber's programming preferences and the received program control information, wherein the subscriber programming preferences are generated from the subscriber specific data; and suggesting the selected programs to the subscriber.

98. (Previously Added) The method of claim 92, used in a television program delivery system for suggesting programming to subscribers using program control information containing menu screen details by searching program abstracts for programs which correlate to key words mapped from one or more subscriber responses to search criteria containing a plurality of selectable entries on one or more menu screens displayed on a television, comprising the steps of:

storing the program abstracts in a database;

storing the menu screen details;

generating the menu screens wherein the menu screens are generated by integrating the received program control information with the stored menu screen details, and wherein the generated menu screens list the search criteria containing the plurality of selectable entries;

displaying the menu screens;

said receiving subscriber specific data comprising gathering subscriber responses to the plurality of selectable entries on the menu screens;

mapping the gathered subscriber responses into the key words;

searching the stored program abstracts for abstracts comprising one or more of the key words;

said selecting step comprising selecting one or more of the programs, whereby the programs are selected using the search of the stored program abstracts; and

suggesting the selected programs.

99. (Previously Added) The method of claim 92, used in a television program delivery system for suggesting programming to subscribers using program control information and by searching program abstracts for programs which correlate to key words mapped from one or more subscriber responses to a plurality of presented selectable entries, comprising the steps of:

storing the program abstracts in a database;

presenting the plurality of selectable entries;

said receiving subscriber specific data comprising gathering subscriber responses to the plurality of selectable entries;

mapping the gathered subscriber responses into the key words;

searching the stored program abstracts for abstracts comprising one or more of the key words;

said selecting step comprising selecting one or more of the programs, whereby the programs are selected using the search of the stored program abstracts; and

suggesting the selected programs.

100. (Previously Added) The method of claim 92, for suggesting programs to subscribers using program control information containing program description data, and subscriber specific data, the method comprising:

said receiving subscriber specific data comprising gathering the subscriber specific data to be used in selecting programs;

storing the subscriber specific data;

said selecting step comprising selecting one or more programs using a subscriber's programming preferences and the program control information, wherein the subscriber's programming preferences are generated from the subscriber specific data.

101. (Previously Added) A method for controlling rendering of a signal having a plurality of channels, said method comprising:

(a) analyzing textual information decoded from a signal having a plurality of channels to determine whether channel contents of said channels are among channel contents defined by selection data; and

(b) arbitrating display and/or record resource contentions among said analyzed channels having channel contents defined by said selection data.

102. (Previously Added) The method of claim 101, wherein said analyzing step comprises:

tuning to said channels to receive said channels, and decoding textual information included with said channels; and

pre-defining said selection data employed in said analyzing step.

103. (Previously Added) An apparatus for performing the method of claim 101, comprising:

(a) one or more analyzing units for receiving textual information indicative of channel contents of said channels decoded from a communication signal, and responsive thereto, analyzing said received textual information to determine if channel contents of said channels are among channel contents defined by selection data; and

(b) an arbitrating unit coupled to said one or more analyzing units to arbitrate display and/or record resource contentions among said analyzing units determining said channels having channel contents that are defined by said selection data.

104. (Previously Added) The apparatus of claim 103, for controlling selective display and/or recording of selected ones of a plurality of channels of a communication signal, wherein:

said arbitrating unit includes an arbitration logic routine for arbitrating said display and/or record resource contentions, in accordance with predefined priority information of said selection data,

the apparatus further comprising

one or more decoding units coupled to said one or more analyzing units for providing said textual information of said channels to said analyzing units, said one or more decoding units receiving said channels of said communication signal, and in response decoding said channels for textual information included in said channels;

one or more signal tuning units coupled to said one or more decoding units for providing said one or more decoding units with said channels, by tuning to said channels of said communication signal; and

one or more buffers coupled to said one or more tuning units for storing portions of the contents of said channels of said communication signal for a predetermined duration of time.

105. (Previously Added) The apparatus of claim 103, wherein:

the contents of said channels include audio/video contents, and said selection data include predefined priority of said audio/video contents;

said selection data include predefined keywords and priorities of selected ones of said channels;

said arbitrating unit automatically causes a display window for displaying the channel contents of a successful one of said arbitrating channels to be activated, amplification of audio signals associated with the activated display window to be adjusted, and/or channel contents of said successful one of said arbitrating channels to be recorded; and

the apparatus further comprises

a profile unit coupled to said one or more analyzing units for providing said one or more analyzing units with said selection data; and

one or more recorders for recording channel contents of successful ones of said arbitrating channels; and

one more decoders coupled to said one or more analyzers for providing said textual information of said channels to said one or more analyzers, said one or more decoders receiving said channels of said signal, and in response decoding said channels for textual information included in said channels.

106. (Previously Added) The apparatus of claim 103, being a computer system having a bus for communicating information, and a signal processing unit coupled to said bus for processing a signal having a plurality of channels.

107. (Previously Added) The apparatus of claim 103, being a communication network system, further comprising:

(a) a communication network interface to communicate in said communication network system;

(b) a communication network server coupled to said communication network interface to receive a signal having a plurality of channels; said communication network server to generate a stream of decoded texts indicative of channel contents of said channels, responsive to said channels;

said communication network server comprising:

(b.1) one or more tuners to tune to said channels;

(b.2) one or more decoders coupled to said one or more tuners to receive said channels, and to generate said decoded texts indicative of channel contents of said channels;

(b.3) one or more buffers coupled to said one or more tuners to temporarily store portions of the channel contents of said channels for a predetermined duration of time; and

(b.4) a server interface coupled to said buffers and said decoders to couple said communication network server to said communication network interface; and

(c) a client computer system coupled to said communication network interface to receive said channels and said decoded texts from said network server, encompassing said analyzing units and said arbitrating unit, to analyze said received decoded texts to determine if channel contents of said channels are among channel contents defined by selection data, and to arbitrate

display and/or record resource contentions among analyzed channels with channel contents that are defined by the selection data,

said client computer system comprising:

(c.1) an analyzer coupled to said communication network interface to perform said analysis; and

(c.2) an arbitration unit coupled to said analyzer to perform said arbitration.

108. (Previously Added) A method of classifying a pattern, said method comprising the steps of:

acquiring a signal, said signal including an input pattern to be classified;

sampling the acquired signal to produce an intermediate pattern based on said signal;

performing a transform on at least a portion of said intermediate pattern, said transform being from the group consisting of wavelet transforms and wavelet packet transforms, to produce a wavelet transformed pattern;

selecting a reduced feature space from the wavelet transformed pattern; and

classifying said input pattern on the basis of said reduced feature space.

109. (Previously Added) The method as claimed in claim 108, wherein said step of classifying said pattern on the basis of said reduced feature space comprises the step of classifying a target on the basis of said selected reduced feature space.

110. (Previously Added) An apparatus for performing the method of claim 104, comprising;

means for acquiring a signal, said signal including an input pattern to be classified;

means for sampling the acquired signal to produce an intermediate pattern based on said signal;

means for performing a transform on at least a portion of said intermediate pattern, said transform being from the group consisting of wavelet transforms and wavelet packet transforms to produce a wavelet transformed pattern;

means for selecting a reduced feature space from the wavelet transformed pattern; and

means for classifying said input pattern on the basis of said reduced feature space.

111. (Previously Added) An apparatus as claimed in claim 110, wherein said means for performing a transform on at least a portion of the intermediate pattern comprises means for performing a wavelet transform on a selected subset of the intermediate pattern.

112. (Previously Added) An apparatus as claimed in claim 110, wherein said means for classifying said pattern on the basis of said reduced feature space comprises means for classifying a target on the basis of said selected reduced feature space.

113. (Previously Added) A system for presenting a program to a viewer, comprising:
a source of program material;
a memory for storing received program material; and
a processor for selectively processing the program material based on a correlation between a viewer preference and a characterization of the content of the program material.

114. (Previously Added) The system according to claim 113, wherein said selective processing is selected from one or more of the group consisting of persistently storing the program material, outputting the program material separately from unselected program material, updating a user preference profile, and deleting the program material from temporary storage.

115. (Newly Added) An apparatus, comprising:
means for storing a plurality of content objects;
means for automatically accessing the content objects;
means for storing a persistent user-specific profile;
means for relating content objects with a stored user profile;
means for rendering to the user the related content objects;
means for implicitly deriving user feedback on said relation by observing the user; and
means for updating the user profile based on said the feedback.

116. (Newly Added) A method, comprising:
storing descriptors of a plurality of content objects;

persistently storing a user-specific profile associated with an implicitly-derived user preference;

associating at least one content object, not previously presented to the user, with the stored user profile associated with the user preference; and

presenting the descriptor of the associated content object corresponding to the user preference to the user.

117. (Newly Added) A method, comprising the steps of:

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automatically generating a user-specific profile representing an interest summary based on a history of access to objects;

persistently storing the user profile in memory;

interactively presenting a set of objects to the user corresponding to the interest summary, and receiving from the user a selection of an object from the set for delivery to the user; and accounting for delivery of the object to the user.

118. (Newly Added) An apparatus, comprising:

means for automatically generating a user-specific profile representing an interest summary based on a history of access to objects;

a memory for persistently storing the user profile;

a user interface, interactively presenting a set of objects to the user corresponding to the interest summary, and receiving from the user a selection of an object from the set for delivery to the user; and

an accounting system for charging a user for delivery of the object to the user.

119. (Newly Added) A system, comprising:

a customer profile, said customer profile indicating a respective customer's preferences for data;

means for monitoring a history of data objects accessed by the customer to derive the respective customer's preferences for data;

means for automatically updating the customer profile in accordance with content profiles accessed by the customer to represent the customer's preferences for data, and accounting for the customer's satisfied demand for data.

120. (Newly Added) The system according to claim 55, wherein:
said persistently stored user profile is received as subscriber specific data;
said history of access to objects is based on received program control information; and
said means for automatically generating a user-specific profile is a program selection means, for selecting one or more programs using the stored user profile and history of access to objects.

121. (Newly Added) The method according to claim 47, comprising the steps of:
receiving subscriber specific data to provide the history of access to objects;
receiving program control information; and
selecting one or more programs using the user subscriber specific information and the program control information.

122. (Newly Added) An apparatus according to claim 55, further comprising:
a source of program material; and
a memory for storing received program material,
wherein said means for automatically generating a user-specific profile comprises a processor for selectively processing the program material based on a correlation between a viewer preference and a characterization of the content of the program material.